UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/677,537	10/03/2003	Tetsujiro Kondo	243480US6	2304

22850   7590   05/15/2007
OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER
SMITH, JEFFREY S

ART UNIT	PAPER NUMBER
2624	

NOTIFICATION DATE	DELIVERY MODE
05/15/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

<table>
<tr><td rowspan="2">Office Action Summary</td><td>Application No.</td><td>Applicant(s)</td><td></td></tr>
<tr><td>10/677,537</td><td colspan="2">KONDO ET AL.</td></tr>
<tr><td>Examiner</td><td>Art Unit</td><td></td></tr>
<tr><td>Jeffrey S. Smith</td><td>2624</td><td></td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>11 April 2007</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3 and 5-14* is/are pending in the application.

    4a) Of the above claim(s) *5-14* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly

indicative of the invention to which the claims are directed. Applicant changed the title

to image processing apparatus, method, storage medium, and program for compressing

an input image using a motion vector. This new title is clearly indicative of the prior art

such as the patents and application mentioned in paragraph 4.

A new title is required that is clearly indicative of the invention to which the claims

are directed.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by

Japanese Application No. JP11258472 by Kondo ("Kondo") filed September 13, 1999

and published March 30, 2001.

For claim 1, Kondo discloses storing means for storing position information of

pixels of a first frame that is earlier in time than a second frame for each address

corresponding to a feature of each pixel (see element 24 of Fig. 5 as used by element

S6 of Fig. 7. The image data of the frame is written in the accumulated image memory 24, according to the camera motion vector v_n. More specifically, the position information of pixels of a frame of image data is stored in addresses in the accumulated image memory 24 corresponding to an address of a feature of each pixel, where the address of a feature of each pixel is the position address of the camera motion vector v_n feature such that the upper left corner of the frame is positioned at the point indicated by the camera motion vector v_n in the reference coordinate system. This reads on the claim element storing position information of pixels of a first frame for each address corresponding to a feature of each pixel. see also Figs. 2, 3, 6A, 6B, 6C, 9, 11, 12, 19, 23), first detecting means for detecting the position information stored at an address corresponding to a feature of a target pixel of the second frame (see Figs. 9 and 11), determining means for determining a centroid of candidate pixels of the first frame which are identified with the position information detected by the position information detected by the first detecting means (see 21 of Fig. 5), and second detecting means for detecting a motion vector of the target pixel from the position of the target pixel and the centroid (see 22 of Fig. 5, see also Figs. 6A, 6B, and 6C, and paragraphs 35-37).

For claim 2, the method of storing (steps S6, S7), first detecting (step S3), determining (step S4), and second detecting (step S5) are performed by the device of Fig. 5 as shown by the flow diagram of Fig. 7 and discussed in paragraphs 39-47.

For claim 3, Kondo discloses a computer program, which, when executed by a processing system, performs the method of storing, first detecting, determining, and second detecting, as shown in Fig. 34.

Claims 1-2 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S.

Patent No. 5,805,736 issued to Kim ("Kim").

For claim 1, Kim discloses storing means for storing position information of pixels

of a first frame that is earlier in time than a second frame for each address

corresponding to a feature of each pixel (see frame memory 160 shown in Fig. 1, and

see col. 3 lines 1-5, the position information is image data that is stored at an address

corresponding to the contour of the object, which is a feature of a target pixel), first

detecting means for detecting the position information stored at an address

corresponding to a feature of a target pixel of the second frame (see col. 3 lines 1-5, the

position information is image data that is stored at an address corresponding to the

contour of the object, which is a feature of a target pixel), determining means for

determining a centroid of candidate pixels of the first frame which are identified with the

position information detected by the position information detected by the first detecting

means (see previous centroid calculation block 210 in Fig. 2 and col. 3 lines 13-25), and

second detecting means for detecting a motion vector of the target pixel from the

position of the target pixel and the centroid (see motion vector detection block 220 and

col. 3 lines 25-33).

For claim 2, the method of storing, first detecting, determining, and second

detecting are performed by the device of Figs. 1 and 2 as discussed in col. 3 lines 1-33.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kim.

For claim 3, Kim discloses the method of storing, first detecting, determining, and

second detecting.

Kim does not disclose expressly a recording medium that stores a computer

readable program for performing the method of storing, first detecting, determining, and

second detecting.

At the time of the invention, it would have been obvious to a person of ordinary

skill in the art to implement the method disclosed by Kim as software code that is stored

in a computer readable medium and executed by a computer system. Applicant has

not disclosed that the claimed recording medium in which a computer readable program

is recorded provides an advantage, is used for a particular purpose or solves a stated

problem. One of ordinary skill in the art, furthermore, would have expected Kim's

invention to perform equally well with a computer readable program recorded in a

recording medium, because the method of Kim is for MPEG compression, which is

generally performed by computer software stored in a computer readable medium,

which, when executed by a computer system, causes the system to perform the method

of compression.

Therefore, it would have been obvious to one of ordinary skill in this art to modify the method of Kim with a software program stored in a computer readable medium to obtain the invention as specified in claims 3 and 4.

Response to Arguments

Applicant's arguments filed April 11, 2007 have been fully considered but they are not persuasive. The attorney argues that the abstract of Kondo fails to disclose storing position information of pixels of a first frame for each address corresponding to a feature of each pixel. To support this allegation, the attorney notes that the abstract states that memory 24 includes images of a frame preceding a frame under consideration included in the accumulated images stored in memory.

In response, Examiner cites particular elements, columns and line numbers in the references as applied to the claims for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested that, in preparing responses, the applicant fully consider the references in their entirety as potentially teaching all or part of the claimed invention, as well as the context of each passage as taught by the prior art or disclosed by the Examiner.

For example, the attorney is expected to read the description of the frame memory in the detailed description. This is greatly expected when the first named inventor is the only inventor of the prior art reference. Instead, the attorney responds by

arguing that the abstract does not have the claim language. The Examiner did not say that the abstract has the claim language, yet the attorney says that the abstract does not have the claim language. Furthermore, everything about Tetsujiro Kondo prior art image processing apparatus is related to storing position information of pixels of a first frame that is earlier in time than a second frame for each address corresponding to a feature of each pixel. See for example Figs. 2, 3, 5, 6A, 6B, 6C, 7, 9, 11, 12, 19, 23 and the corresponding discussions in the specification.

Applicant further argues that Kim fails to disclose storing position information of pixels of a first frame for each address corresponding to a feature of each pixel. This claim element is so vague that storing position information of pixels of a first frame for each address corresponding to a feature of each pixel is broad enough to include position information of image data that is stored at an address corresponding to the contour feature of the pixels, as disclosed by Kim at col. 3 lines 1-5.

The difference that is being asserted is apparently the words "for each address." Every memory has an address. Every position information of a pixel that corresponds to a feature is stored at an address. The feature of the pixel is stored at an address. The position information of pixels corresponding to a feature also correspond to the address storing the feature. Furthermore, although the claim only recites "storing information of pixels" and not "storing position information of all pixels," a memory that stores an image has to include storing position information of each pixel at an address in memory, storing a feature of each pixel such as brightness at an address of memory,

and corresponding the position address with the feature address to reproduce the

image on a display.

The memory in each patent applied in the rejections go beyond this by storing

position information of pixels at an address corresponding to a feature of each pixel

such as the motion vector for the pixel or the contour for the pixel, among other

disclosed features, for example.

Requirement For Information

Applicant and the assignee of this application are required under 37 CFR 1.105

to provide the following information that the Examiner has determined is reasonably

necessary to the examination of this application in light of the arguments made by the

attorney in the amendment filed on April 11, 2007.

In response to this requirement, please provide a statement signed by the first

named inventor Tetsujiro Kondo indicating whether he believes that the prior art image

processing apparatus reference by Tetsujiro Kondo fails to teach or suggest a storing

means for storing position information of pixels of a first frame that is earlier in time than

a second frame for each address corresponding to a feature of each pixel. The

statement should be more than a mere conclusion to be persuasive. The portions of

Kondo's image processing apparatus that store position information should be

discussed, and the problems with Kondo's image processing apparatus that cause it to

fail to store position information of pixels for each address corresponding to a feature of

each pixel should be clear, such as for example the following. If the pixels do not have

features, how do they form an image? If the pixels are not correlated with features, how are the images displayed? If the feature is not stored at an address, where is it stored? If the position information of the pixel is not correlated with an address of its feature, how is the information accessed from memory? A statement signed by anyone other than Tetsujiro Kondo will be considered but will probably be unpersuasive because of the clear showing of storing position information of pixels in the prior art image processing apparatus reference by Tetsujiro Kondo.

In response to this requirement, please state whether the first named inventor Tetsujiro Kondo or the coinventors or the assignee Sony Corporation have filed or are aware of another application filed in the United States or a foreign country that claims or discloses a storing means for storing position information of pixels of a first frame that is earlier in time than a second frame for each address corresponding to a feature of each pixel. If so, please disclose each application (both foreign and domestic), and for each disclosed application please state whether a rejection was made in the application. If a rejection was made, please provide a copy of the rejection.

In response to this requirement, please state whether a rejection was made in a corresponding foreign application such as Japan 2002-296135, 2002-296136, 2002-296137. If a rejection was made in a corresponding foreign application, please provide a copy of the rejection. For example, if the Japanese Patent Office issued a rejection in one of the corresponding Japanese applications, please submit a copy of each Japanese rejection. If a corresponding application has been filed in Europe and has received a rejection, please submit a copy of each rejection.

This information is material to patentability. Applicant is reminded that failure to fully reply to this requirement for information will result in a holding of abandonment. This requirement is an attachment of the enclosed Office action. A complete reply to the enclosed Office action must include a complete reply to this requirement. The time period for reply to this requirement coincides with the time period for reply to the enclosed Office action.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.
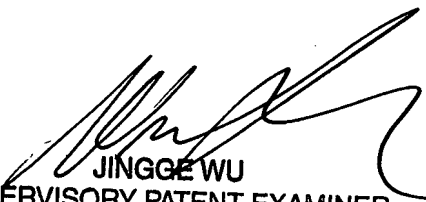
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jeffrey S. Smith whose telephone number is 571 270-1235. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571 272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JSS
May 2, 2007

JINGGE WU
SUPERVISORY PATENT EXAMINER